

Understanding Crypto Staking

A Shariah Analysis

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GLOSSARY

Bay' Al-Sarf	currency exchange
Fatwa	Shariah Ruling or Resolution
Gharar	uncertainty
Hibah	gift
Ijarah al-A'mal	fees on service
Ju'alah	contract of specific rewards to the successful completion of a specific task
Mal	asset
Maysir	gambling
Mudarib	entrepreneur
Musyarik	partner
Rabbul Mal	capital provider
Riba	interest
Tawarruq	two sale and purchase contracts. The first involves the sale of an asset by a seller to a purchaser on a deferred basis. Subsequently, the purchaser of the first sale will sell the same asset to a third party on a cash and spot basis
Qard	loan
Qirad	mudarabah

INTRODUCTION

Crypto staking represents a fundamental mechanism in the blockchain world, pivotal for the operation and security of many digital currency networks. It is a process that allows participants in a blockchain network to lock up a portion of their holdings to gain the right to perform various network functions. In return, stakers are often rewarded with additional cryptos.

Recently in Malaysia, Luno, one of the Digital Asset Exchange registered with the Securities Commission of Malaysia, has officially launched its Ethereum (ETH) staking feature, which allows customers to earn up to 4% p.a. in ETH if they stake their holding. Interestingly, Luno made a disclaimer that their staking feature has not yet been assessed for Shariah compliance.

Hence, this paper will discuss crypto staking in general and analyse potential Shariah issues and requirements where applicable with the hope to increase awareness and understanding plus advocating further research within the Islamic Finance fraternity and Shariah scholars on the crypto ecosystem.

WHAT IS STAKING?

At its core, staking is the act of locking crypto to receive rewards. In many blockchains, staking is a key component of the transaction validation process or consensus mechanism. Unlike the Proof of Work (PoW) system, which requires solving complex mathematical problems, Proof of Stake (PoS) and Delegated Proof of Stake (DPoS) systems depend on staking. Validators are chosen to confirm blocks based on the number of cryptos they stake.

Proof of Stake (PoS)

In PoS blockchains, the process of creating and validating new blocks is called forging or minting. The PoS algorithm selects validators from a pool of crypto holders who have staked their crypto. The more crypto you stake, the higher the chances of being selected as a validator. ETH, Cardano (ADA) and Solana (SOL) are examples of cryptos that use the PoS system.



Delegated Proof of Stake (DPoS)

DPoS is an evolution of the PoS concept, introducing a democratic element where stakeholders elect delegates to validate and forge blocks. This system is designed to be more efficient and scalable, reducing the number of validators needed. EOS (EOS) and TRON (TRX) are examples of cryptos that use the DPoS system.

WHY CRYPTO HOLDERS STAKE?

The primary incentive for staking is the potential for earning rewards. These rewards are akin to interest in a conventional finance setup or in the context of Islamic Finance for better understanding, the rewards are akin to dividend on investment account, Hibah on Qard saving account or profit on Tawarruq fixed deposit account. Staking also contributes to the blockchain's security and efficiency. By participating in staking, crypto holders can help a network achieve consensus while earning rewards.

Despite its benefits, staking is not without risks. The primary risk is slashing, a penalty applied when validators fail to fulfill their responsibilities or act maliciously. This can result in a loss of a portion or all of the staked cryptos. Market volatility can also affect staked cryptos, as the value of rewards may fluctuate with changing market conditions. Validators must adhere to network rules to avoid slashing.

Another possible risk is downtime which poses a risk to validators in PoS networks. Validators may face penalties or reduced rewards if their nodes experience extended periods of inactivity or downtime. This risk emphasises the importance of maintaining a robust and reliable infrastructure.



In the event of slashing or downtime, crypto holders who have staked their cryptos may experience a reduction in rewards or potential losses. Validators sharing mechanisms might be affected, leading to diminished returns for holders. Therefore, participants should carefully choose reliable validators and monitor network conditions to minimize risks.

Staking in Ethereum 2.0

Ethereum 2.0 represents one of the most significant shifts to staking within the blockchain space. In Ethereum 2.0, validators are required to stake 32 ETH to participate in block validation. The staking rewards vary based on the total amount of ETH staked and the overall activity on the network. Validators may seek participation from other crypto holders to stake their ETH for the block validation process and share rewards via a smart contract.

Staking via Cryptocurrency Exchanges

Many crypto exchanges now offer staking services, allowing users to stake their crypto directly through the platform. This has made staking more accessible to the average cryptocurrency holder. Popular exchanges like Coinbase and Binance offer various staking options, catering to different cryptos and charge commission on the rewards received.

Process of Staking on Exchanges:

1. Account Creation

Users must first create an account on the chosen exchange platform.

2. Coin Purchase or Transfer

Users purchase crypto from the Exchange or transfer crypto from their crypto wallets.

3. Option into Staking

Exchanges usually have a dedicated section for staking where users can choose which cryptos to stake

4. Rewards and Terms

Each cryptos has its own staking rewards and terms, including the duration of staking and the expected annual yield or Annual Percentage Yield (APY)



Advantages of Exchange-Based Staking:

Convenience

Staking through exchanges is user-friendly, especially for those who are not technically inclined.

Diverse Options

Exchanges offer a variety of cryptos for staking, allowing users to diversify their staking portfolio.

Security

Established exchanges provide a level of security for staked cryptos, though not without risks.

Considerations:

Platform Fees or Commission

Some exchanges charge fees for staking services, major exchanges such as Binance and Coinbase charge commission on rewards received.

**Control over Cryptos**

Staking through an exchange means the user does not hold the private keys to the staked cryptos, which some might view as a drawback

SHARIAH ANALYSIS

First and foremost, to discuss the issue of staking, we must recognise the Fatwa of Shariah scholars and Shariah regulatory bodies such as the Shariah Advisory Council of Securities Commission (SAC SC) which recognises cryptos or digital asset as Mal in Shariah.

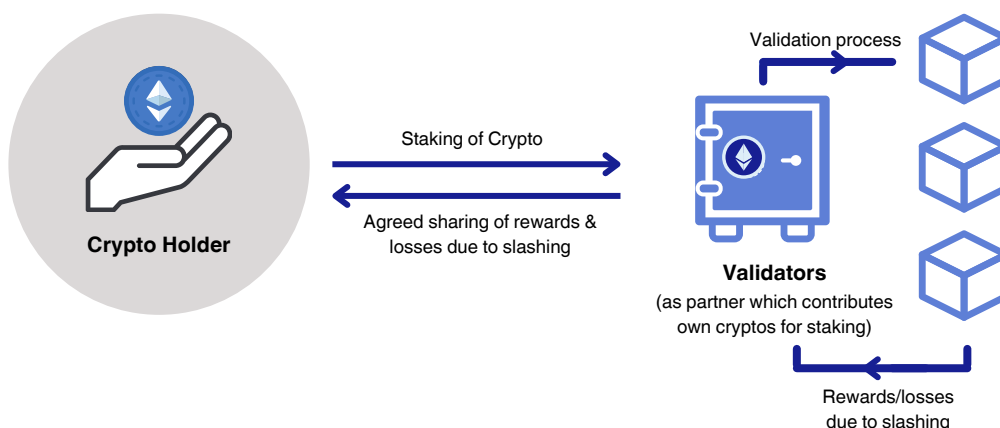
SAC SC at its 233rd Meeting on 29 June 2020 and its 234th Meeting on 20 July 2020 had made the above Fatwa and made a distinction between digital asset that is based on technology for example Bitcoin (BTC), ETH and SOL and digital asset that is based on Ribawi items such as gold, silver and currencies.

For the purpose of this paper, we will only focus on the first category of cryptos which are technology based where it is not considered as currencies. Hence, the Shariah requirements of Bay' Al-Sarf will not be applicable.

Then, we assess the nature and structure of staking, suggest the compatibility of the structure with the Shariah contracts. Our understanding and assessment of the general structure of crypto staking PoS and DPoS, two main Shariah contracts may be relevant.

Musyarakah

Bank Negara Malaysia (BNM) Policy Document on Musyarakah issued in 2015 defined Musyarakah as a partnership between two or more parties, whereby all contracting parties contribute capital to the Musyarakah venture and share the profit and loss from the partnership. Another reference will be the Shariah Standard No. 12 on Sharikah and Modern Corporations issued by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) which define Sharikah or Musyarakah as an agreement between two or more parties to combine asset, labour or liabilities for the purpose of making profit.



In the structure of staking, crypto holders and validators combined their holding of cryptos in order to be selected for the validation process. Once completed, the rewards which come from new cryptos and fees received will be shared between the all contributors.

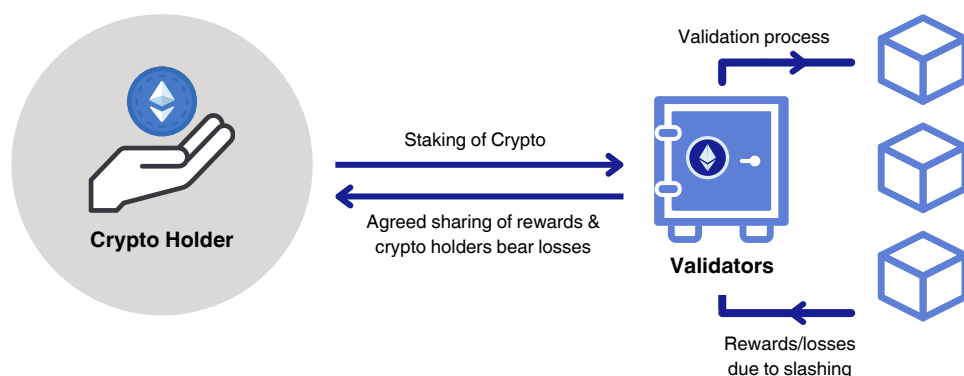
Similarly when staking using exchange, exchange may charge an upfront fee or charge a commission which is deducted from the rewards that would be received by the users of their stake features. For example staking on Binance, a 10% fee is applied prior to the staking reward distribution and for Coinbase, commission up to 35% is charged based on the rewards received.

As an exchange, they may charge a fixed fee for their service provided or a percentage in the reward as partners for the staking process depending on the terms and conditions. The contract of Ijarah al-A'mal or using the contract of Ju'alah may be an option. However, if the exchange chooses to be a Musyarik, in the event of loss due to slashing or downtime, each partner has to bear the losses proportionately.

On the issue of contributing cryptos in the staking process not cash for the partnership, both BNM Policy Document and Shariah Standard No. 12 by AAOIFI allows the capital contributed to be in-kind or in the form of commodities or labour which make the Shariah contract suitable to be the basis of the transaction.

Mudarabah

Bank Negara Malaysia (BNM) Policy Document on Mudarabah issued in 2015 defined Mudarabah as a contract based on a fiduciary relationship between a Rabbul Mal and a Mudarib. Under a mudarabah, any profit generated from the capital is shared while financial losses are born by the Rabbul Mal. Similar definition as stated in Shariah Standard No. 13 by AAOIFI on Mudarabah or Qirad.



In the structure of staking, crypto holders who stake their holding will be the Rabbul Mal and the validator will be the Mudarib. Any reward generated will be shared based on a predetermined profit ratio while losses will be borne by the Rabbul Mal or the crypto holders. For staking via exchange, the exchange may also be a Rabbul Mal if the exchange provides capital or if it does not, it may be a Mudarib, sharing the reward portion with the validators. A more straightforward structure will be to charge a fee for its service as a platform using Ijarah al-A'mal or Ju'alah as mentioned above.

On capital contribution or cryptos to be staked, BNM allows the capital to be in-kind even if it is an intangible asset and AAOIFI allows the capital to be in the form of tangible asset not cash. Hence, no issue in the form of capital provided for the Mudarabah venture.



CONCLUSION

Based on our assessment on the general structure of staking crypto, we are of the opinion that it is permissible in Shariah based on the Islamic Legal Maxim:

“The presumption of validity and permissibility applies to all contracts and conditions.”

We are of the opinion that the general staking process direct to validators or by major exchanges such as Binance and Coinbase have no major Shariah Non Compliance elements: Riba, Gharar and Maysir, at least for staking of cryptos that are technology-backed. The underlying contract that is applicable to justify the contract between crypto holders and validators are Musyarakah as each will contribute cryptos for staking and share profit and loss in the event of slashing.

For staking on exchange, Ijarah al-A'mal or Ju'alah agreement may be the underlying contract to justify the rewards or commission to the exchange. One particular concern to be stated here is on the level of knowledge and information that crypto holders have before staking their holdings, this is crucial to ensure the element of Gharar and harm is minimal.

Although no Shariah terms is used in the current offering by validators or exchange on staking, the Islamic Legal Maxim also states that:

“Greater weight is given to intention and meaning than words and forms.”

However, to give confidence and acceptance by the Muslim crypto holders, assurance of Shariah compliance and having specific Shariah contracts should be justified to ensure the roles and responsibilities of each party in the transaction, such as the sharing of rewards and losses, the scope and compensation for issues related to misconduct and negligence.

Staking stands as a crucial component of the crypto ecosystem. It not only provides an avenue for earning rewards but also plays a crucial role in maintaining the security and efficiency of blockchain networks. As the industry evolves, staking mechanisms are likely to become more refined, with a focus on enhancing user participation and network stability.

Crypto landscape is rapidly evolving, with new staking models and platforms emerging, hence we must be able to accelerate our learning process in order to be up to date with the emerging trends. For potential crypto holders who are considering to stake their holding, they should be well-informed about the specific staking process, associated risks, and rewards of the crypto they are interested in aside from the Shariah requirements on staking.

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